

Mining Childhood

Grade 4 Lesson Two: Mapping Butte before and after the Berkeley Pit

Essential Question: How do neighborhoods shape our identity as we grow up?

Learning Targets:

1. I can describe the Berkeley Pit
2. I can contrast Butte neighborhoods
3. I can draw inferences about the loss of culture resulting from the loss of neighborhoods

Common Core Connection:

[CCSS.ELA-Literacy.RH.6-8.1](#) Cite specific textual evidence to support analysis of primary and secondary sources.

[CCSS.ELA-Literacy.RH.6-8.2](#) Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.

[CCSS.ELA-Literacy.RH.6-8.7](#) Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

Montana Social Studies Standards:

- 3.1 Grade 4: Students will identify and use various representations of the Earth (e.g., maps, globes, photographs, latitude and longitude, scale).
- 3.3 Grade 4: Students will describe and illustrate ways in which people interact with their physical environment (e.g., land use, location of communities, methods of construction, design of shelters).
- 4.5 Grade 4: Students will identify and illustrate how technologies have impacted the course of history (e.g., energy, transportation, communications).

Length of Lesson:

Two sixty-minute periods

Materials Needed:

1. Note-taking sheets with three columns: "What I Noticed," "What I Wonder," and "Possible Answers" (enough copies for each student)
2. Poster series (large size) available for free from <http://www.pitwatch.org/2010-berkeley-pit-posters/>
3. Information about the Berkeley Pit, found at <http://www.pitwatch.org/31-years-since-pumps-stopped/>
4. Printed information about various other aspects of the Pit from the following webpages: <http://www.pitwatch.org/what-is-the-current-water-level-in-the-pit/>, <http://www.pitwatch.org/category/aboutsuperfund/>, <http://www.pitwatch.org/smithsonian-com-toxic-runoff-yellow-and-other-paint-colors-sourced-from-polluted-streams/>
5. Quote from [John Mazzola interview from *Mining Childhood* \(p. 80\)](#)

6. Map of Butte neighborhoods and mines (enough copies for all students, below, page 5)
7. [Same map](#), in color (for teacher's reference and to project. [Download here.](#))
8. Photo: Burying Holy Savior School (below, page 6—to project, or one copy per table)
9. Four-Square note-taking chart (enough copies for each student, below, page 7)

Day One

Hook: Hang the posters “Mining the Berkeley Pit,” “The Berkeley Pit: The Water Returns,” and “The Berkeley Pit: Treating the Water” in the room. Ask students to circulate by them, using their note-taking sheets with three columns as they go. They may not fill in any “possible answers” until later. (10 mins)

Activities:

1. Ask students to share some things from their note-taking pages. Encourage students to answer each others' questions as they come up. Make a list of things you're still wondering at the end of the discussion.
2. Ask students to listen carefully while you provide information from the historical website on the Berkeley Pit: <http://www.pitwatch.org/31-years-since-pumps-stopped/> You may have to paraphrase this information if students have trouble with the vocabulary. As they hear answers to their questions, they should write them down in the “Possible Answers” column of their papers.
3. Put students into pairs or trios based on remaining questions they have and provide additional graphics from the www.pitwatch.org website to answer their questions. They should spend time in small groups trying to answer their questions, and if they don't find answers they should be prepared to provide other interesting information they learn.
4. Allow 3-4 minutes per group toward the end of the period to present their information (40 mins)

Assessment:

Ask students to spend 10 minutes answering the following question: “What are three important things you could say about the Berkeley Pit to describe it to someone who doesn't know anything about it?”

Day Two

Hook:

Read quote from John Mazzola (p. 80). You may want to read it twice.

1. As students listen, have them write down words that describe the various groups of people living in the neighborhoods. Which names have they heard before, and which have they not?

2. Do a word splash on your board or overhead projector: Write “BUTTE NEIGHBORHOODS” in the center. Ask students to call out the descriptive words they wrote, and you write them around the center. The result will be a summary of the quote, facilitated by students as a whole group. (15 mins)

Activities:

1. Share the learning targets for today. Students have already begun to complete #1. Ask them to explain, from what they heard, what they think will be different between the neighborhoods. You will likely hear foods, traditions, holidays, language. You may want to make notes of students' responses on the board. Explain that this is what makes up “culture.” (5 mins) The purpose of sharing the learning targets is for students to know what you want them to learn and to keep the lesson on track. → meets Learning Target 1
2. Provide the four-square note-taking chart. Explain to students that you will be sharing three things with them. After each item, you'll ask them to write a reaction in one of the boxes. First, provide them with copies of the map at their desks so they can really study the map. Lead them in a short discussion of what they notice, including the names of the neighborhoods they see and what they remember about those neighborhoods from the John Mazzola quote. Then ask them to reflect on this map: what does it make them wonder? What does it make them think? Ask students to write their initial reactions in the top left box, where the words “At first I think” appear.
3. Now, on your overhead, project the color version of the map. Take a black marker and go over the boundary of the Berkeley Pit, marked in orange. Explain that the Berkeley Pit swallowed up all the land inside the black line you've drawn. According to the map legend, it included “the district of Meaderville, home to Italians, Serbs, Croats, and the center of the nightclub scene in old Butte. Construction of the pit and alterations in roads caused the demolition of much of the East Side and part of Finn Town and Dublin Gulch.” (Have them circle the names of those places on their maps.) Have students darken this line on their maps too (A thin dotted line marks the boundary on the student maps).
4. Then, draw a dark line that shows the neighborhoods destroyed by later surface mining (marked on your map in blue.) Share the legend: “Later surface mining operations, outlined in blue, consumed the district of McQueen, shown on this map, and the famous Columbia Gardens, which were off this map to the right.” Have the students mark that area as well (again, denoted by a thin dotted line on their maps.)
5. Work with students to estimate the fraction of Butte (as shown on this map) destroyed by surface mining.
6. Then ask them to study their maps, and write their thoughts and questions in the top right hand box that says “Now I think...”
7. Finally, show them the photograph of the school being buried by the bulldozer. (Show it on the overhead or distribute copies to each table.) **Don't**

- discuss.** Allow students quiet time to look at it and reflect. Then ask them to write in the bottom left box, where it says “And now I think...”
8. Share the following information: The picture is of Holy Rosary School in McQueen (find McQueen on the map). The dump truck is burying the school with dirt it is removing from the Pit.
 9. In the final box on the bottom right, ask students to consider how the Berkeley Pit destroyed neighborhoods. What do they think about that? How would they have felt if that was their neighborhood or their school that was buried? (20 mins total)
 10. Lead a discussion about the loss of those neighborhoods: which ones were they? What happened to the people when their homes and schools were torn down? What happened to their distinct cultures? Avoid giving a complete answer so there’s something to assess in the final writing. (5 mins)

Assessment:

Ask students to respond to the following question: How did Butte’s culture change when the Berkeley Pit was opened? → meets Learning Target 3

Extension Ideas:

- Students consider the importance of learning about other cultures by writing about their own culture, or interviewing a family member about the family’s background, traditions, foods, and so on. They can then share some of this information in a panel format or poster gallery.
- Create an activity using the photos found at <http://www.pitwatch.org/portfolio/photos-of-the-berkeley-pit-over-time/>. Divide students into groups of 3-4 and print enough copies of each photo for each group to have a complete set. Mix them up and ask students to organize them chronologically. They will understand that the Pit grew over time, and that the water rose over time. You can use this to further discuss land use, neighborhood loss, and environmental effects of the Pit.
- Have students conduct an investigation of the snow geese incident where 342 snow geese were found dead on the Pit’s liquid surface. As a starting place, check out this website <http://sometimes-interesting.com/2013/11/20/casualties-of-copper-the-berkeley-pit-montana/> and scroll down the “Snow Geese Incident.”
- For a science study, students could study the algae growing in the Pit. Here’s a starting point; you will need to address the high-level vocabulary in this article if you choose to use it. <http://discovermagazine.com/2000/dec/featnewlife#.UuvHxxZdK5c>
- For a canine-interest story, students can read about The Auditor. http://missoulain.com/uncategorized/mangy-mutt-makes-the-pit-his-home/article_7cbf5bea-6495-5ac1-b3ac-3a736f4b6479.html and http://missoulain.com/mtracker/news/the-auditor-diesposted-at-a-m-november/article_5999e45e-9a9f-5375-b349-e07e050bba23.html

Map of Butte MONTANA

As it appeared before
the advent of open pit
mining changed the face
of the original city.

Based upon aerial
photography from 1950

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Patrick Sullivan

The principal mining area,
"The Hill," is shown in a
lighter shade of gray.

In 1900, when Butte was
in its heyday, The Flats
south of the railroad tracks
contained only a few
homes and shops.
In the next 30 years, the
population grew consid-
erably, and most of this
increase was in The Flats.



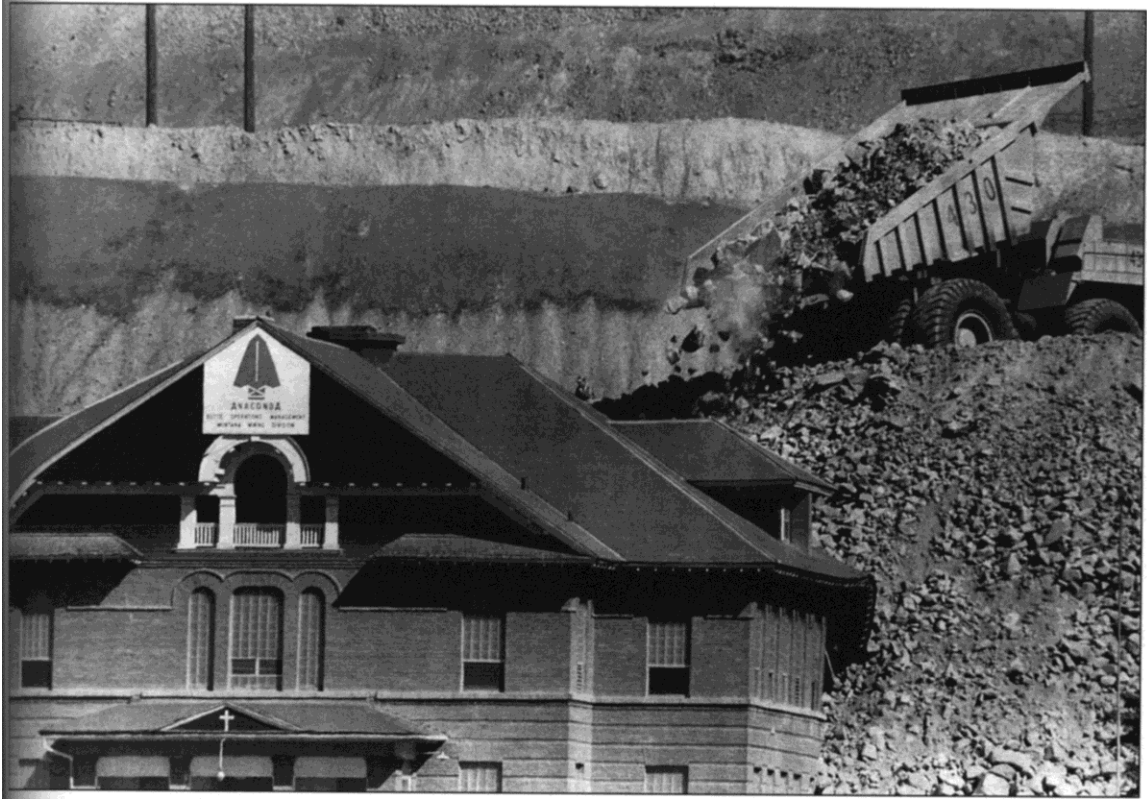


Photo by Walter Hinick of the *Montana Standard*

Name _____

At first I think...	Now I think...
And now I think....	Finally I think...